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Engels, H.L.  
1935-1936

1. various California counties  
May 1935 - May 1936
2. Arizona  
May - June, 1936
3. Wisconsin  
June, 1936







Engels, W. L.  
various California Cos.  
1935 - 1936







Engels, W.L.  
1935

various California counties  
Catalog of specimens #275-305  
General accounts







100-ft., 1/2 mi. NE American River, North Sacramento,  
Sacramento Co., Calif. May 9, 1935

- 275 ♀ Thomomys 175-50-23-4 clay soil
- 276 ♀ Thomomys 180-48-27-4 "  
100-ft., 0.7 mi. NE American River, North Sacramento,  
Sacramento Co., Calif. May 9, 1935
- 277 ♀ Thomomys 198-55-27-5 clay soil
- 278 ♀ Thomomys 165-45-23-4 "  
35 ft., 13.3 mi. S Sacramento. Sacramento Co. Calif.  
May 9, 1935
- 279 ♂ Thomomys 195-60-27-5 Testis x 4 mm Clay soil
- 280 ♂ Thomomys 188-53-28-5 testis x 5 mm (C. R. Sprinkle) "  
100-ft., 0.8 mi. NE American River, North Sacramento,  
Sacramento Co., Calif. May 9, 1935 clay silt
- 281 ♂ Thomomys 170-47-24-5 testis x 4 mm (C. R. Sprinkle) "  
May 10, 1935 silty clay
- 282 ♂ Thomomys 205-63-26-5 testis x 14 mm  
0.7 mi. NE American River, North Sacramento  
May 10, 1935 clay soil.
- 283 ♀ Thomomys 170-47-23-5  
2 1/2 mi. N Stockton, San Joaquin Co., California  
May 10, 1935
- 284 ♀ Thomomys 195-55-25-5 (C. R. Sprinkle)  
May 11, 1935
- 285 ♀ Thomomys 190-55-24-6
- 286 ♂ Thomomys 220-65-29-7 testis x 17 mm
- 287 ♂ Thomomys 220-68-28-6 testis x 15 mm
- 288 ♀ Thomomys 170-50-25-4  
32 ft., 6/10 mi. N Byron, Contra Costa Co., Calif.  
May 11, 1935
- 289 ♂ Thomomys 217-65-30-7 testis x 5 mm black, clayey  
rocky soil.  
Berkeley, Alameda Co. Calif.  
May 30, 1935
- 290 ♂ Junco Killed accidentally (mouse-trap) | in captivity - | Band  
H 57643







Engels  
1935

Berkeley, Alameda Co., Calif. June 6, 1935. died in captivity.

291 Junco band. H-57645

June 7, 1935. died in captivity

band H-57644

Dillon Beach, Marin Co., Calif.

292 *Phalaropus fulicarius*. June 29, '35. Pick-up. skeleton.

1 mi. S. Salmon Creek, Sonoma Co., Calif. June 30, '35.

293 *Uria troille californica*. Captured on beach. head-formalin skeleton.

1/2 mi. S. Nick's Cove, ~~Mar~~ Tomales Bay, Marin Co., Calif. July 4, '35

294. Large Hawk. Skeleton, pick-up.

Rolland Pond, Dillon Beach, Marin Co., Calif. 210 yds from ocean

295 garter snake July 23, 1935

296 " " "

297 " " "

Second. Shad-Road Pt., Dillon Beach, Marin Co. Calif. July 24, '35

298 Sea-lion. Skull. From carcass washed up on beach - 1/2 mandibles - maxillae + paws.

6.2 mi. ssw Merced, Merced Co., California

Nov. 8, 1935.

299 ♂ *Thomomys* 202x50x23x5 testis x18mm

300 ♀ " 170-55-22-4

301 ♀ " 165-45-22-3

16 mi. wsw Los Banos, Merced Co., Calif. Nov. 8, 1935

302 ♀ *Speotyto* alcoholic (minus skin + viscera)

Sweeney Ranch, 22 mi wsw Los Banos, Merced Co. Calif.

303 ♂ *Toxostoma redivivum* skeleton

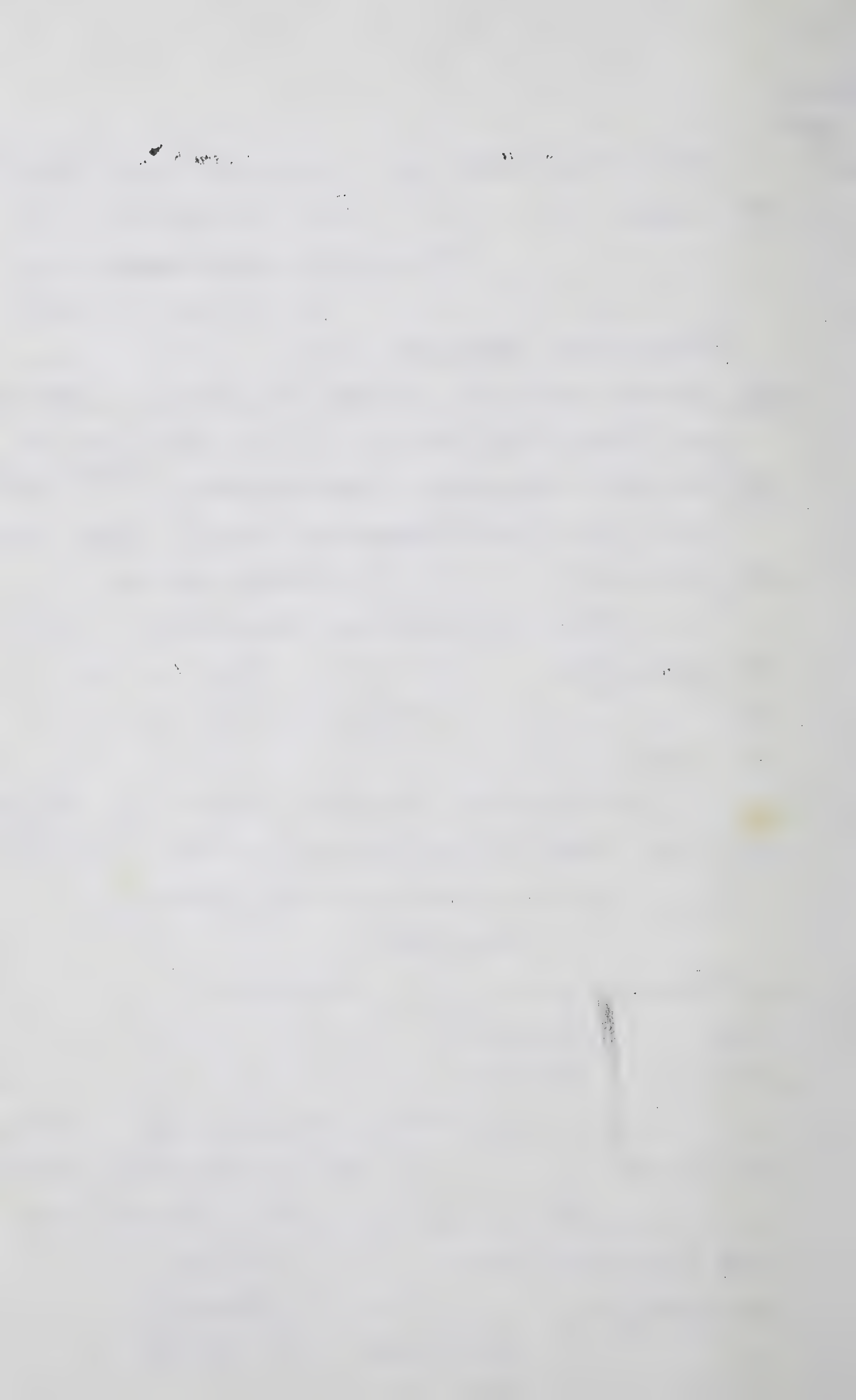
304 ♂ *Sylvilagus* skull only.

Nov. 9, 1935

1500 ft.

305 ♀ *Thomomys* 185-50-23-3



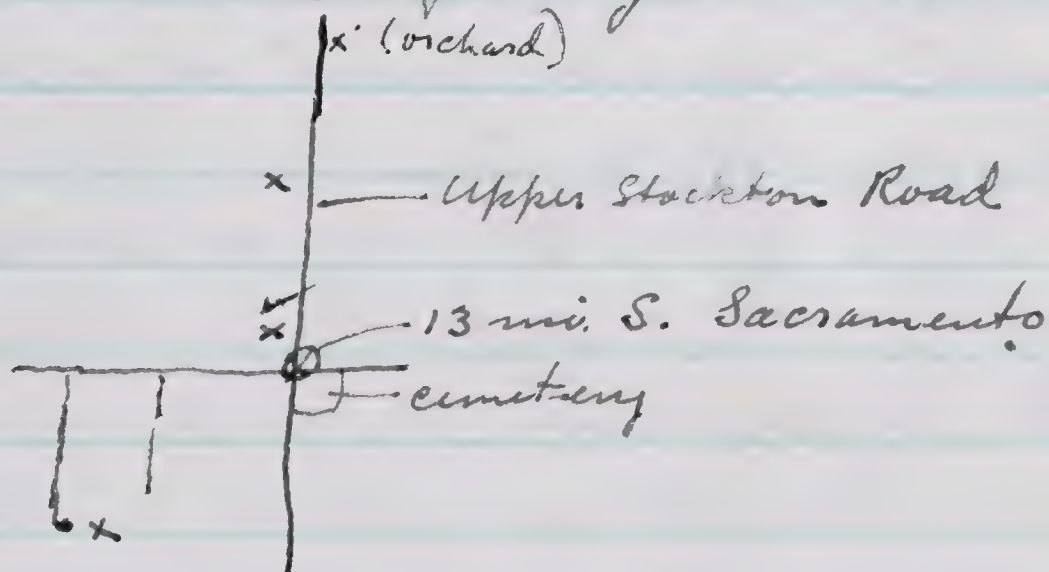




Engels  
1935.

Vicinity of Sacramento  
Sacramento County, California.  
Yolo Co., Calif.

May 8, 1935. Left Berkeley with C. R. Sprinkle at 10:00 clock this morning. First stop, for gophers, was 1 mi. <sup>west</sup> ~~east~~,  $\frac{1}{2}$  mi. south of Elk Grove Cross road, which is 13 mi. south of Sacramento. In an alfalfa field here I set out 1 trap. workings were very hard to see because they were hidden by the rank vegetation.  $\frac{1}{4}$  mi. north of Elk Grove Cross. road ( $12\frac{3}{4}$  mi. S. Sacramento) I made another set on a bank by a culvert. A third set put out 12 miles south of Sacramento in a field by the road.



Fourth set made in roadside ditch about 1 mi. north of last (about 11 mi. S Sacramento).

Sprinkle set out 6 traps to my four, in approximately same localities.

We drove on into Sacramento & took U.S. Highway 99W out of town (toward Davis). We looked for signs of pocket gophers all along this road, driving slowly, and getting out & walking twice, up to the Yolo Causeway (Yolo County). We drove to the west end of the Causeway and since the



13.4

95.8

12.7 min

96.3 96.4 12.9 min.

96.4 X clay 13.2

97.1 cross-val 13.5

97.8 side

98.4 form

---

24.5

24.25



Engels  
1935.

Vicinity of Sacramento  
Sacramento Co., California.  
Yolo Co., Calif.

May 8, 1935 (cont.)

country there was about the same we turned + came back. Throughout this entire stretch, from Sacramento west, we saw absolutely no signs of pocket gopher, although we searched diligently. The country is very low + marshy, cut by drainage ditches, dykes + railroads ~~and~~ road-embankments. When it is not cultivated, to beets + other truck-garden stuff, it is covered by an extremely lush + rank vegetation. It is probably throughout too wet, periodically (spring rains + floods), for pocket-gophers. We thought we might find them along the railroad embankments, but there were none we could see. We also followed, for a few miles, a road more or less paralleling U.S. 99W about 1 mi. north - this country was similar in topography, + without pocket gophers that could be seen.

May 9, 1935. This morning we set out to look for gophers ~~NW~~ of Sacramento + found workings in + about an old race-track, now used as a pasture for horses, on the east side of U.S. Highway 99E,  $\frac{1}{2}$  mi. NE American River, in the outskirts of Sacramento. I made two sets, one of them a double. We then drove south out of Sacramento along U.S. Highway 99 (Upper Stockton road) to look at the traps set out yesterday + checked mileage to these points on the truck's speedometer. At the orchard (12.2 mi. S Sacramento) my single set was undisturbed but there were fresh diggings



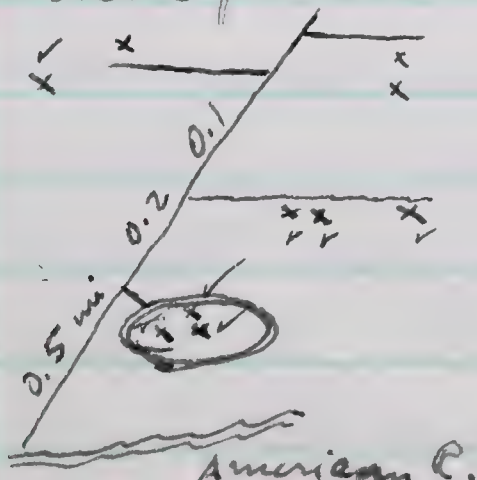




Engels  
1935

Vicinity of Sacramento  
Sacramento Co., California

immediately adjacent to it, & I reset in those. I found more fresh diggings in two spots further along the ditch between road & orchard & made 2 more sets. In all three of these diggings, freshly cut vegetation was found in the burrow mouth. The third of yesterday's sets (12.7 mi. S Sacramento) was plugged up & the trap buried. The second set, at the culvert just north of the crossroad (13.3 mi. S Sacramento) caught an immature gopher. The subsoil here was red clay. Yesterday's first set, in the pasture SW the cross road, was undisturbed, & I picked up the trap. Sprinkle caught one gopher here. We returned to Sacramento; looked at my 3 by the orchard on the way but the sets were undisturbed. We then ran the traps NE the American river; I caught a sub-adult ♀ in each of my two sets. I made another set here, in the horse-pasture — we drove on 0.2 mi. further; in the grass alongside an irrigated garden I put out three traps.  $\frac{8}{10}$  mi. N American river we turned west on a short side road, & in a field of alfalfa & wild oats, where diggings were quite scarce I put out another trap.



After lunch we ran the traps S of Sacramento again. Not disturbed — left them there. Returned to Sacramento, N of American river — no gopher at old race-track; took up trap.







Engels  
1935

Vicinity of Sacramento  
Sacramento Co., California. + Stockton,  
San Joaquin Co., California

May 9, 1935. (cont.)

We then went on to our next locality -  $\frac{8}{10}$  mi. NE American River. - This is just inside the city limits of North Sacramento, + our site are at the end of Birch Ave. I put out one more trap here.

Later we crossed U.S. 99E + went along Southgate Road, North Sacramento for about a half-mile - in a field here I found fairly fresh looking workings in two places + put out 2 traps. We then ran all the traps we had out, but had no luck.

We picked up one of my sets at the Orchard (12.2 mi. S. Sacramento) + Sprinkle reset it nearby.

May 10, 1935. Sprinkle was sick last night + unable to skin, so we had to take care of his skins this morning + did not get away from our auto camp in West Sacramento until 11:00 am. We first ran our traps <sup>+ in</sup> near ~~At~~ <sup>in</sup> North Sacramento, + picked them all up. None of mine were disturbed except two; - I took an adult ♂ gopher in the field at the end of Birch Ave, North Sacramento + a young ♂ gopher in the road by the garden 0.7 mi. NE American River. We then headed south + picked up our traps near Elk Grove (12<sup>+</sup> mile S Sacramento) - mine were undisturbed. All in all, we had fair luck at Sacramento, inasmuch as gophers were extremely hard to locate.

After lunch we headed for Stockton, + finding numerous diggings along US 99, about 2-3 mi. N Stockton we stopped + set out some traps. I had difficulty locating the holes under the mounds + made only 4 sets. The soil is somewhat more sandy, less clayey than near Sacramento, + the burrows much







Engels  
1935

Stockton, San Joaquin Co. California  
Byron, Contra Costa Co., "

May 10, 1935 (cont.)

larger. Around Sacramento I had almost always to enlarge the burrows to get the traps in; but there near Stockton are big enough so that I can put my whole hand in. - Leaving these traps we went to Byron, in Contra Costa County, about 20 mi. W Stockton. Between Stockton & Byron are the Old & Middle Rivers, & the San Joaquin River, around which is a long stretch of low, marshy and peaty land, in which we saw no gopher diggings. Red-wing Blackbirds were extremely numerous all along this road. About  $\frac{1}{2}$  mi. N Byron we found many diggings along the road, & set out some traps. I put out 4 sets. These diggings were all in a very hard, black dirt (adobe?) in which were mixed numerous angular rocks. It was tough work digging out the holes, for us; - these must be tough gophers. Like the Stockton burrows, these were of quite large diameter. In the mounds, & in the ~~the~~ plugged up entrances, I found much cut vegetation, some quite fresh. When any of this showed on top of the mound, I found I could locate the burrow easily by following it down. - We went back to Stockton & looked at our traps. Mine were not touched - Sprinkle got 1 gopher. I pulled up one of my doubles & reset, so that I now have 5 sets there, & 4 sets near Byron - nine sets to leave out for the night. Tonight was spent skinning; I put up three skins. Sprinkle put up 2 skins & cleaned a skull.







Merced Co., California

Engels  
1935

Nov. 7, 1935. Left Berkeley about 5:30 this afternoon with Roger Sprinkle in the Museum Res truck. Drove here (Merced) via Tracy + Modesto, arriving about 9:30 p.m. Evening clear + cold. Put up in a cabin at Cronk's Auto Camp.

Nov. 8, 1935:

This morning we drove out of Merced toward El Vado, about 55<sup>W</sup>, leaving near 8:00 clock. The land hereabout is very flat, as far as one can see to the south, west + north. To the east the Sierra foothills were barely visible in the haze. Stopped by the roadside, 6.2 miles 55<sup>W</sup> of Merced, and both Sprinkle + I set out traps for pocket gophers. I made 10 sets, 2 of them doubles. The ground is very hard, black + lumpy; it was not easy digging. While making one set I heard something behind me, turned, + saw a gopher pushing his head out of an open hole in a clump of grass about 15 feet away. There was no dirt about this opening. Later I set a trap there. Pocket gopher workings were very numerous along the roadside + in the fields all around here.

Scattered along the roadside we saw many tufts of cotton, apparently blown around from nearby cotton-fields, one of which we saw some 3-4 miles SSE Merced. Saw a Spilogale by the road, but thoroughly smashed, + we did not pick it up. One Citellus sitting on a fence-post. Birds seen along the road included Shrikes, English sparrows,







Merced Co., California

Engels  
1935

Nov. 8, 1935

Brewer Blackbirds, Meadow-larks, Killdeer, 2 Crows,  
1 Sparrow Hawk, 1 large, brownish Hawk with a  
conspicuous white rump, + numerous small birds not  
identifiable from the car by me. Returned to Cronk's Auto  
Camp at 11:00 am to have lunch.

After lunch we checked out of the camp, + started for Los Banos,  
stopping again to pick up our traps 6.2 mi. ssw Merced.  
Sprinkle had 2 gophers; I caught 3 pocket gophers.

Continuing on our way to Los Banos. - In a canal  
about 10 mi. e Los Banos we saw 3 Great Blue Herons.  
Further on toward Los Banos we passed numerous  
ponds, pools + ditches, in which were hundreds of Coots.  
We saw no ducks here. Twice we passed large  
flocks of sheep, and to each time we saw scores  
of Brewers Blackbirds among them, many perched on  
the heads + necks of the sheep. Arrived at Los Banos  
we stocked with provisions, obtained keys to her  
ranch from Mrs Clara Sweeney, + directions, + went  
on. We had great difficulty locating the ranch, but  
finally arrived there near 5:00 p.m. This is about  
22 miles wsw Los Banos, in Hennessey Canyon,  
in the foothills on the west side of the San Joaquin  
Valley, in Merced County, near the San Benito Co.  
line, somewhat south of Pacheco Pass (see  
U.S. topo sheet, California: Orin Lake quadrangle).  
(alt. 1250 ft.). To get there one turns south from the  
Pacheco road in the western outskirts of Los Banos,







Engels  
1935

Sweeney Ranch, Herrero Canyon, 22 mi. wsw Los Banos  
Merced county, California

opposite a tavern called Red Star Inn. Drive about six miles; here is a cross-road + a grove of pepper-trees. Turn right (west) + drive for about two miles, where there is a gasoline plant (Shell) on the right. Turn left here, into the foothills. There are several broad roads over the flat <sup>bare</sup> hills, running beside + across one another. Several miles on, a barn appears on the left. Just before one reaches the barn the roads swing left. Follow there. A windmill shows up on the right. Not far beyond is a small ranch-house, + a lone oil-well on the hill back of it. This is about 13 mi. from Los Banos. Continue straight on to a cross-road, a mile or so further, where there is a number of abandoned <sup>ranch</sup> buildings off to the right. Turn right at the cross-roads, past the abandoned ranch. Coming to a fence inclosing a low wet spot, turn left along the fence, following it past a small house; at the base of a big hill further on is a swinging wooden gate in the fence on the right, turn in here. This is the entrance to Herrero Canyon; the Sweeney ranch house is a few miles up this road.

These hills are alive with ground squirrels, riddled with their burrows, + crisscrossed by their well-beaten surface runways. We distinguished smaller <sup>browner</sup> redder ones, + larger grayer squirrels. Saw 4 Burrowing Owls + collected one. Saw 2 Brush Rabbits + collected one. Sprinkle collected a Black-tailed Jack Rabbit







Engels  
1935

Sweeney Ranch, Herrero Canyon, 22 mi. wsw Los Banos,  
Merced Co., California.

the only one we saw. We also saw hundreds of Horned Larks coming in here. At the ~~at~~ wet spot just before entering Herrero Canyon (Carrisalito Spring?) we saw 2 Killdeer. Arrived at the Ranch we unpacked + while Sprinkle started supper I took a short-swing around the hills. Collected a California Thrasher on the flank of Sweeney Hill, south of the ranch-house, at about 1500 ft. Heard many quail in the canyon below. These hills were also riddled with ground-squirrel workings, but I saw no signs of pocket-gophers.

Nov. 9, 1935. This morning early Sprinkle + I set out + found gopher workings on the sides of the hills on the south wall of the canyon, just ~~so~~ west of the ranch-house. The soil was reddish in color, + very rocky. The mounds were difficult to spot because the hillsides are riddled with ground-squirrel workings. I made 9 sets. When I ran the trap line at noon I found only one gopher. I pulled up 2 other sets, leaving 6, + made 6 more sets further west in the canyon. The gopher workings are not only difficult to spot, but exceedingly difficult to dig out, because of the rockiness of the soil. This afternoon I saw many Brush-Rabbits, especially on one hill near the west-end of the canyon, on the south wall, where I saw 6 in a half-hour, + shot two. Both skins were badly shot up, + I will make up the skulls only, in the morning. These rabbits were







Engels  
1935

Sweeney Ranch, Hovers Canyon, 22 mi. wsw Los Banos,  
Merced Co., California.

too easy — they jumped out from under-foot, ran only a short distance + then stopped, sitting still, usually still in full view. Also saw one Black-tailed Jack Rabbit. Although the ground-squirrel burrows are everywhere, + ~~this summer~~ the hills ~~covered with~~ <sup>covered with</sup> the crisscross patterns of their surface runs, I saw ground-squirrels only in a small flat at the bottom of the canyon just west of the ranch-house. They were very alert — as I would come to the top of the hill, 200 or more feet above them and more than 300 feet away, I could see them scurry from all sides of the flat to their burrows toward the center. It was impossible to approach them within shot-gun range. Mrs. Sweeney, who came out to the ranch tonight, said she placed poison-grain all over this flat, about the fresh-burrow entrances, about two months ago, + was sure she had killed off all the squirrels there at that time. If she did, at least two score have come in from the surrounding territory in the past two-months — I saw at least that many. Saw another California Thrasher this morning, and a Long-eared Owl in the cottonwood at the ranch house.







Engels, W. L.  
Arizona, 1936







Sweeney Ranch, 22 mi. wsw Los Banos,  
Merced Co., California

Nov. 9, 1935

1500 ft.

306 ♂ *Thomomys* 225-70-29-5 Testis 12 mm.

Nov. 10, 1935

1500 ft.

307 ♂ *Thomomys* 195-63-26-4 Testis 11 mm.

308 ♀ " 170-50-21-3

309 ? *Tylvoilegus* skull only.

310 ? " "

311 ♀ *Thomomys*

312 *Salpinctes o. obsoletus* alcoholic

313 *Corvus* wght 406 gr. W. 295; T. 175 alcoholic

314 *Corvus* wght 395 gr. W 285 T 170 thrown out

315 *Corvus*

Berkeley, Alameda Co. Calif. May 14, 1936

316? *Toxostoma redivivum sonoriense*. Skeleton. C-323 448

Picked up by C.W. Quaintance, bed Strawberry Creek, below  
poultry lab., Strawberry Canyon. Dead for some days. Was  
banded Dec. 6, 1935 "about half-way up small canyon north  
of Strawberry swimming pool" (Mary Erickson; note).

May 24, 1936

8 miles south Coolidge, Pinal County, Arizona.

317 ♂ *Toxostoma lecontei* skeleton 57.0 gr.

318 ♂ jr. " 51.0 gr.

319 ♂ jr. " 59.5 gr.

320 ♀ jr. " 51.5 gr.

321 ♀ " 67. gr.

322 ♀ *T. c. palmeri* " 76.5 gr





Engels  
C936

May 24, 1936.  
8 mi. south Coolidge, Pinal county, Arizona

- ✓ 323 ♂ *Toxostoma bendirei* skeleton 59.0 gr.  
✓ 324 ♂ " *dorsale* skeleton 64.5 gr.

May 25, 1936

- ✓ 325 ♂ *Dipodomys* 235 x 140 x 35. ear 10 39 grs testis 10 mm.  
✓ 326 ♂ " 250 x 150 x 36 ear 11 36 grs. testis 6 mm.  
✓ 327 ♂ *Perognathus* skull only 175 x 95 x 20 ear 6. 15.5 grs. testis 8 mm.  
✓ 328 ♂ " skull only 180-100-21-6 19.0 gr. testis 7 mm.  
✓ 329 ♂ " skull only 185-98-21- 18.5 gr. testis 6 mm.  
✓ 330 ♂ *Neotoma* 310-135-33-26 142. gr. testis 9 mm.  
✓ 331 ♂ " 305-135-33-25 126 gr. testis 6 mm.  
alcoholic  
✓ 332 Night Hawk.  
skeleton only  
✓ 333 *Toxostoma bendirei* 62 grs.  
skeleton only  
✓ 334 *Toxostoma lecontei* 62 grs.  
skeleton only  
✓ 335 *Toxostoma dorsale* 57 grs.  
skeleton only  
✓ 336 juv. *Toxostoma dorsale* 56 grs.

11 mi. S Coolidge, Pinal Co., Ariz. May 25, 1936

- skeleton  
✓ 337 ♀ *Toxostoma bendirei* 55.5 gr.

5 mi. S Picacho P.O., Pinal Co., Ariz. May 26, 1936.

- skel.  
✓ 338 ♀ *Toxostoma c. palmeri* wght. 65.5 gr.  
skel.  
✓ 339 ♂ " " 74 gr.  
alcohol  
340 juv " " 27.5 gr } nestling of preceding pair  
alcohol  
341 juv " " 38 gr } " " "  
skel.  
✓ 342 ♀ " " 77 gr.  
skel.  
✓ 343 ♀ " " 75.5 gr.  
alcohol  
344 juv " " 51.0 gr } nest of preceding ♀  
skel.  
✓ 345 ♀ " " 69 gr.  
skel.  
✓ 346 ♂ " " 73.5 gr.





5 mi. S Picacho P.O., Pinal Co., Arizona

Eugls  
1936

alcohol

May 26, 1936

347 juv. *Toxostoma c. palmeri*

348 juv. " "

2 } nestlings of  
48 gr. } preceding pair

349 ♂ *Cactus wren*

May 27, 1936

350 ♂ *Toxostoma c. palmeri*

75 gr.

351 ♂ " "

82.5 gr.

352 ♀ " "

71. gr.

353 imm. ♀ " "

51.0 gr.

in post. juv. molt.

354 ♀ " "

74.0 gr.

355 ♂ *Toxostoma bendirei*

60.5 gr.

356 juv. *Helodytes b. conesi*

18.5 gr. very young nestling.

May 28, 1936

357 ♂ *Helodytes b. conesi*

358 juv. ♂ *Lanius b. sonoriensis*

42.5 gr.

359 ♂ *Centurus u. uropygialis*

76.0 gr.

testis 9 mm.

360 ♂ *Toxostoma bendirei*

56.5 gr.

testis 14 mm

361 ♀ " "

56.0 gr.

(chick)

362 ♂ " *c. palmeri*

70.5 gr.

testis 9 mm

363 ♂ " " "

83.5 gr.

" 16 "

364 ♀ " " "

62.5 gr.

365 ♂ " " "

79.5 "

testis 13 mm

366 ♂ " " "

73.0 gr.

" 17 "

367 ♂ " *bendirei*

52.5 gr.

" 9 mm

368 juv. " *c. palmeri*

18.5 gr.

May 29, 1936

369 ♀ *Toxostoma dorsale*

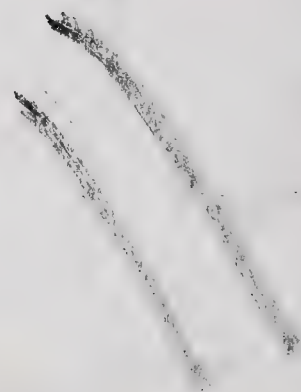
52.5 gr.

in post-juv. molt.

370 ♀ " *c. palmeri*

76.5 gr.

parent of nest  
2 nestlings.





Engels  
1936

5 mi. S Picacho P.O., Pinal Co., Ariz. May 29, 1936 (cont.)

- alc. 371 ju. *Toxostoma c. palmeri* wght 53 gr. { nestling + mate  
alc. 372 ju. " " " 49 gr. { fresh nest of  
no. 370.  
✓ 373 ♀ *Chrysothrix* 109.5 gr.  
Pick-up. 374 ju. *Heterodytes b. couesi* Found stuck in thorns of cholla cactus  
below entrance to nest.

3 mile W Coolidge, Pinal Co., Ariz.

May 30, 1936

- skel 375 ♀ *Toxostoma dorsale* 57.5 gr.  
skel 376 ♂ " " 64.0 gr. testis 6 mm.  
alc 377 ju. " " 30.5 gr. - nestling of preceding  
pair.  
skel 378 ♂ " " — testis 6 mm  
skel 379 ♂ " *c. palmeri* 84 gr. " 18 mm  
skel 380 ♀ " *bendirei* 63.5 gr.  
skel 381 ♂ " *bendirei* 63.5 gr. —  
skel 382 ♀ " " 56.5 gr.  
skel 383 ♂ " " 51. gr. testis 11 mm.  
alc + breast + hind skin. 384 ju. *Toxostoma bendirei* 41.5 gr. nestling of preceding  
pair.

May 31, 1936.

- ✓ 385 ♂ *Pipilo aberti* testis 11 mm. 47 gr. iris dark brown.  
skel. 386 ♂ *Toxostoma bendirei* 61 gr. testis 13 mm  
skel + breast + hind skin 387 ju. " " 53 gr.  
skel 388 ♂ " " 62 gr. testis 12 mm  
skel 389 ♂ " *dorsale* 61.5 gr. " 7 mm

June 1, 1936.

- alc 390 ju. *Otus asio gilmanii* full sized + getting about.  
alc. 391 ju. *Toxostoma c. palmeri* 27.5 gr.  
alc 392 ad. " " 82 gr. { back of ear skin same color as  
rest of head  
iris grey - mouth red, under  
horny parts pale lavender; tips of  
tongue black - papillae white.  
alc 393 ju. *Geococcyx californianus* 111.0 gr.





Engle  
id 36  
alc.

3 mi. W Coolidge, Pinal Co., Ariz.

June 1, 1936 (cont.)

- 394 ju. *Toxostoma bendirei* in. <sup>scrambling</sup> among bushes.  
skel. ♀ " 56 gr. (parent of preceding)  
395 skel. ♂ " dorsale 59 gr. testis 7 mm  
skel. imm. ♀ *Buteo swainsoni* 711 gr. stomach contents: grasshoppers only  
397 skel. ♂ *Toxostoma dorsale* 62.5 gr. testis 7 mm  
398 ju. ♂ " 55.0 gr.

June 2, 1936

- 400 skel. ♂ *Toxostoma bendirei* 61 gr. L testis 16 mm R " 14 "  
401 skel. ♀ " dorsale 58.5 gr.  
402 skel. ♂ " " 64 gr. L testis 8 mm R " 6 "

6 mi. N Olberg P.O., Pinal Co., Ariz.

June 2, 1936

- 403 alc. ju. *Toxostoma c. palmeri* 25.5 gr.  
404 skel. ju. " " 59 gr. fledgling, unable to fly. Tail 75 mm.

2 mi N Florence, Pinal Co., Ariz.

June 2, 1936.

- 405 skel. ♂ *Toxostoma c. palmeri* 78 gr. L testis 15 mm R " 13 " {molting inner primaries  
406 skel. ju. ♂ " lecontei 55 gr.  
407 skel. ♀ " " 65.5 gr. molting middle primaries " tail feathers

June 3, 1936.

- 408 skel. ♀ *Toxostoma lecontei* 64 gr. {molting inner primaries  
409 skel. ♀ " " 59 gr. molting prim. I+II and middle tail feathers  
410 skel. ju. ♀ " " 59.5 gr.  
411 skel. ♂ " " 66 gr. {molting primaries testis 3 mm  
412 skel. ♀ " " 62 gr. {molting II on each side; innermost primaries already molted.  
413 skel. ju. " " 57 gr. post-juv molt just beginning L testis 13 mm R " 10 "  
414 skel. ♂ " bendirei 54.5 gr.





Engels  
1936

pick-up 2 mi. N Florence, Pinal Co., Ariz. June 3, 1936  
415 *Dipodomys*

Rillito Creek, 5 mi. N Tucson, Pima Co., Ariz.

June 3, 1936

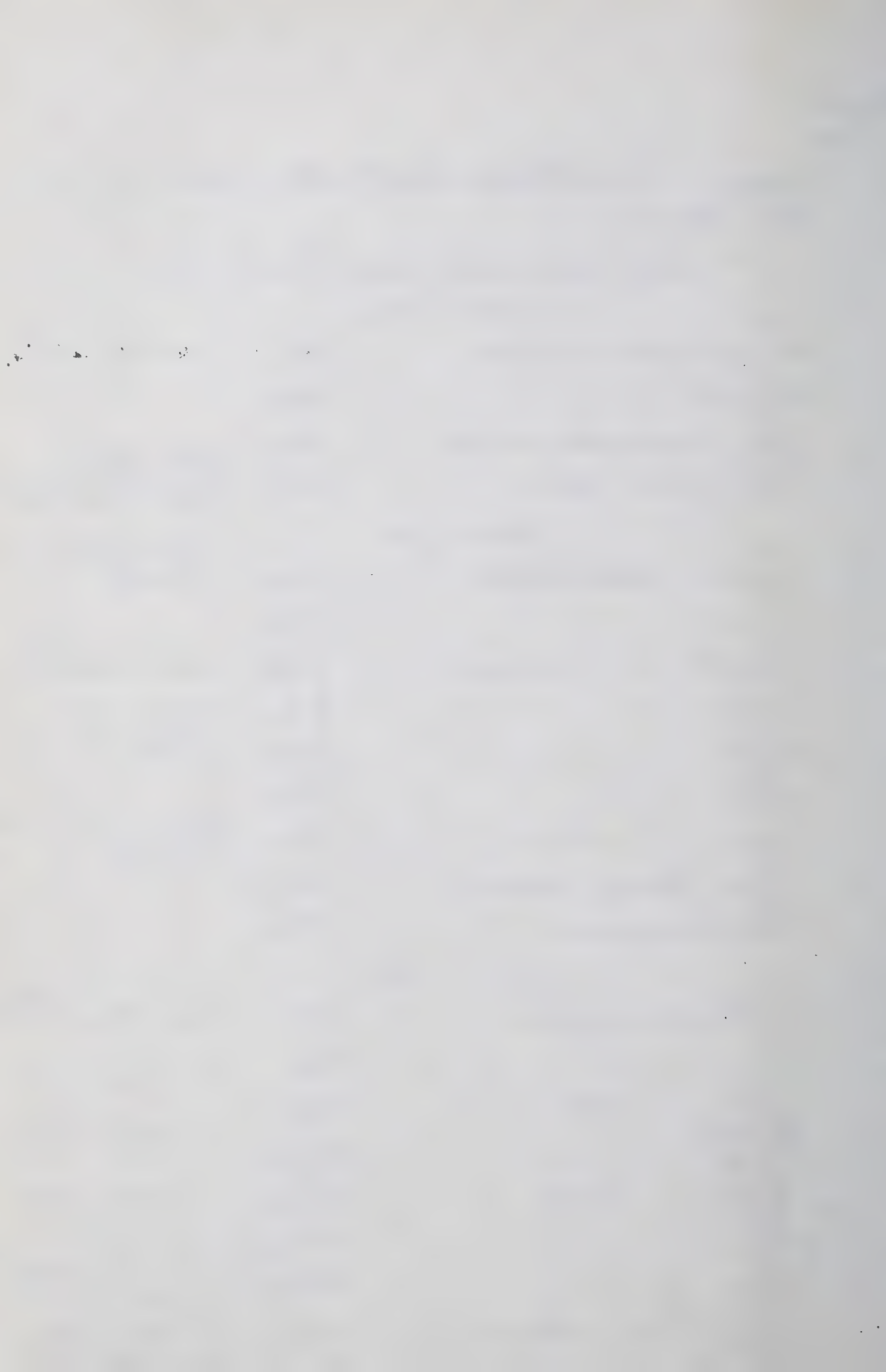
skel	✓ 416	ju. ♂	<i>Toxostoma dorsale</i>	55 gr.	in post-juv. molt.
skel	✓ 417	ju. ♀	" "	56 gr.	"
alc.	418		<i>Micropallas whitneyi</i>	38 gr.	
skel. imm	✓ 419	♂	<i>Buteo borealis</i>	929 gr.	{ shot about 7 pm 1 young quail in gullet 1 kangaroo rat in gizzard

June 4, 1936

skel	✓ 420	imm ♀	<i>Toxostoma dorsale</i>	53 gr.	post-jv. molt almost complete
skel	✓ 421	♀	" "	57 gr.	
skel	✓ 422	ju. ♂	" <i>c. palmeri</i>	71 gr.	in post-jv. molt; eye pale yellow
skel	✓ 423	♂	" "	81 gr.	1. testis 17 mm.
skel	✓ 424	♀	" "	81 gr.	2 eggs laid; 1 in oviduct.
skel	✓ 425	♀	" "	70 gr.	
alc	426	ju.	" <i>bendirei</i>	43 gr.	{ sitting in mesquite; no nest near. flew 50 ft.
alc	427	ju.	<i>Minus p. leucopterus</i>	35.5 gr.	
alc	428	♀	<i>Falco sparverius</i>	89.5 gr.	

June 5, 1936

skel. ju.	✓ 429	♂	<i>Toxostoma c. palmeri</i>	69 gr.	L. testis 3 mm.   in post-jv. molt.
skel	✓ 430	♀	" "	79 gr.	
skel	✓ 431	♀	" <i>bendirei</i>	58 gr.	quite fat.
alc.-head only	432	ju.	" "	53 gr.	in post-jv. molt
skel	✓ 433	ju. ♀	" <i>dorsale</i>	55.5 gr.	in post-jv. molt.
skel	✓ 434	♂	" "	65.5 gr.	L. testis 8 mm R. " 6 "
alc	435	ju.	" "	56.5 gr.	in post-jv. molt.
skel imm	✓ 436	ju. ♀	<i>Pipilo f. mesoleucus</i>	38 gr.	post-jv. molt almost complete.
alc	437	ju.	<i>Pyrhuloxia</i>	8 gr.	{ nestling about 2 days old. Nest in Cholla cactus 2 young.





Engels, W. L.

Wisconsin

1936





Engels  
1938

Ht. Lowell, Pima Co., Ariz.

June 6, 1936

- 438 ♀ *Neotoma* 305-140-31-22 157.7 gr.  
439 ♀ *Perognathus* 205-115-26-6 27 gr.  
alc. 440 *Toxostoma c. palmeri* 3 embryos. several days before hatching.  
skel 441 ♂ ad. " " testis 19 mm.

2 mi NE Ht. Lowell, Pima Co., Ariz.

June 7, 1936

- alc 442 Lizard caught on trunk of mesquite  
Red Banks, 12 mi NE Green Bay  
Brown Co., Wisconsin

June 17, 1936

- alc jr. 443 *Dumetella carolinensis*. { only nestling in nest.  
another out of nest in  
adjacent cedar thicket

June 22, 1936

- alc 444 jr. *Dumetella carolinensis* one of 3 nestlings several days old.

June 23, 1936

- alc 445 ad. *Dumetella carolinensis*

- alc 446 jr. " " { one of 4 nestlings few days  
older than 444

- alc 447 jr. *Toxostoma rufum* one of 2 nestlings several days old.

June 24, 1936

- skel 448 jr. ♂ *Toxostoma rufum*. fledgling. tail 85 mm (sheath about 25 mm) iris pearl gray; mouth yellow, white tongue

- skel 449 ♀ *Dumetella carolinensis*

- skel 450 ♂ " " L testis 10 mm; R testis 6 mm

- alc 451 jr. " " fledgling just out of nest

- alc 452 jr. " " " slightly older than preceding.

- alc 453 jr. " " nestling; little mate of 444; collected 48 hrs. later

- alc 454 jr. " " " " 446 " 30 " "





Engels  
1936

Red Banks, 12 mi NE Queen Bay, Brown Co. Wisc.  
June 25, 1936

alc  
455 juv *Dumetella carolinensis* litter-mate of 444+453; 24 hrs after 453  
alc  
456 ju " " " { 446+454; 24 hrs after 454  
alc  
457 ju " " " { 457 jumped out of nest + ran.  
456 no attempt to escape.

July 8, 1936

alc  
458 embryo *Dumetella carolinensis* } from nest of 3 eggs.  
alc  
459 ju " } eggs laid June 25,  
alc  
460 ju " } June 26, + June 27.

July 9, 1936

alc  
461 embryo *Dumetella carolinensis*

{ 11-12 days incubation  
egg probably laid June 28;  
nest contained 1 young  
+ 1 cracked egg beside  
this one

July 12, 1936

alc  
462 juv. *Dumetella carolinensis*

July 13, 1936

alc  
463 juv. *Dumetella carolinensis*

} hatched July 9 or 10

July 23, 1936

alc  
464 juv. *Dumetella carolinensis*

- 1 of 2 young, 5-6 days old.

Berkeley, Alameda Co., California

alc.  
465 juv *Tyto alba* prat

600.2 gr.

alc.  
466 juv.

489.4 gr.

skel.  
467 juv. ♂

525.0 gr.

skel.  
468 juv. ♂

515.3 gr.

skel.  
469 juv. ♂

516.3 gr.























